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ABSTRACT

This brief uses a regional approach to address issues related to teacher quality and supply. It discusses some of the factors and prospects that might inform the regional perspective, focusing on raising the ceiling by working as a region on teacher quality, viewing teacher quality as the key to reaching goals for student achievement, and examining the regional labor pool to deal with teacher supply (noting such issues as school enrollment, salary differences, projected shortages, and turnover, attrition, and the reserve pool). The brief offers five recommendations for regional action, including creating full regional reciprocity for those who meet exemplary performance levels; creating higher standards for teacher preparation and holding institutions of higher education accountable for graduates' knowledge and skills; creating in each state a three-tiered licensure system; leveraging pooled regional resources to create a streamlined, technology-based application and hiring process and electronic hiring hall; and seeking funding as a region for a longitudinal impact study to inform future efforts to improve teacher effectiveness. Questions for state policymakers are included throughout the brief. (Contains 29 references.) (SM)

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Ensuring Teacher Quality and Supply: A State and Regional Approach

The State Board Connection
Issues in Brief
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NATIONAL ASSOCIATION OF STATE BOARDS OF EDUCATION

The State Board Connection

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ISSUES IN BRIEF

This *Issue Brief* on using a regional approach to address issues related to teacher quality and supply is adapted from a white paper written for state education policymakers in Delaware, the District of Columbia, Maryland, New Jersey, and Pennsylvania. In February, state board members, state education officials, and business leaders from these states met to discuss the white paper and find out if there was general agreement on the paper's recommendations and a consensus around next steps for regional action. See the box on page 11 for more details on this meeting.

Ensuring Teacher Quality and Supply: A State and Regional Approach

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The challenges of improving teacher quality and availability continue to confront every state in the mid-Atlantic region. Indeed, elevating the overall quality of the teaching work force and ensuring the supply of well-trained, effective new teachers are growing priorities for policymakers across the country. Yet, despite the numerous issues that transcend state boundaries, efforts to address these challenges and priorities have rarely been pursued cooperatively across the region. More often, states have continued to act as if their own teacher quality issues could and should be resolved within their own borders.

Current reform efforts have now pushed the issue of teacher quality to a new level of importance. Most states have developed rigorous new content standards in core areas and either have or are now developing new assessments to measure progress toward these standards. In a dramatic move toward ensuring responsibility, states will be holding districts, schools, and in some cases students and educators accountable for student learning. As seen through polls and in board rooms and legislative chambers, citizens, business leaders, and policymakers everywhere understand the importance of these efforts. They recognize that their state's economic viability is tied closely to the quality of education provided in their K-12 schools. And that depends, to a very large degree, on the ability of their teachers to teach well.

When high stakes are added to accountability systems, states assume a greater responsibility to ensure access to competent teachers. As recent studies discussed later in this *Issue Brief* reveal, students' performance on graduation tests will largely be determined by the effectiveness of the teachers to whom they have been assigned. Therefore, as states require greater knowledge and skill of students, so must they ratchet up expectations for those who teach them. And added to this challenge is the rising percentage of at-risk students entering the schoolhouse door, a reality that further heightens the need for the best teachers if standards are to be met.

> Efforts to improve teacher quality...appear to be on a collision course with simultaneous efforts to reduce class size and with projections of high rates of retirement and turnover.

Efforts to improve teacher quality, however, appear to be on a collision course with simultaneous efforts to re-

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Report Card on State Improvement Efforts from *Quality Counts '99*

	DE	MD	NJ	PA	DC
Standards and Assessments	B	A	B-	B	n/a
Efforts to Improve Teacher Quality	C+	B	C+	C	n/a

Source: *Quality Counts '99*: An Education Week/Pew Charitable Trusts report on education in the 50 states.

duce class size and with projections of high rates of retirement and turnover. Unless each state is able to put a well-qualified, effective teacher in each classroom, the larger goal of improved student learning will be unattainable. Achieving this larger goal requires sustained strategic efforts that reflect a truly regional perspective. Some of the factors and prospects that might inform that regional perspective are the subject of this *Issue Brief*.

Proposal: Raise the Ceiling by Working as a Region on Teacher Quality

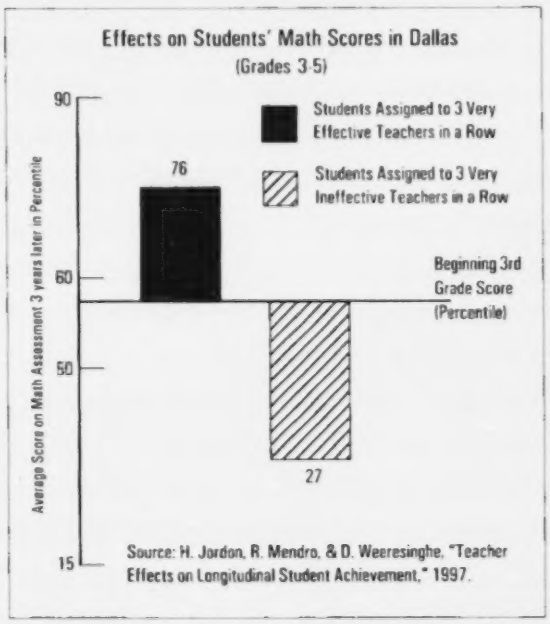
"Today in some states it may be harder to graduate from high school than to become a certified teacher. Something is wrong with this picture," states Diane Ravitch (1998) of the Brookings Institution. Her claim is supported by dismal scores on basic skills tests by teachers in numerous states and districts. Indications are that the basic literacy and content area knowledge and skill levels required by many states for teachers is significantly below that required for students on their state graduation tests (Haycock, 1999). Certainly no one should get a license to teach without demonstrating a knowledge base exceeding that which students must learn. As Haycock puts it, "You cannot teach what you do not know."

Yet when trying to raise state requirements for teacher preparation and licensure, chief state school officers and state boards of education are often thwarted by fear of a resulting shortage of teachers. In the mid-Atlantic region, which has high mobility rates and relatively short distances to state lines, these concerns are understandable. At the same time, increasing attrition rates of new teachers (as high as 50% in the first five years in some urban districts) and class size reduction efforts add to the supply problem. Individual states and universities also worry about driving prospective teachers out of their state due to teacher requirements that are higher than those of their neighbors.

In many respects there is already a regional labor market for teachers in the mid-Atlantic. Now is the time to evaluate the implications of that regional labor market for each of the states as well as the region as a whole. Now is also the time to take advantage of these regional features by identifying those areas in which greater coordination of efforts might improve teacher quality across the entire region. Recognizing how this can be done is not self-evident. Different states and different institutions within the states continue to have very different profiles and often competing needs. At the same time, there are areas of mutual advantage that should be pursued collaboratively.

Teacher Quality: The Key to Reaching Goals for Student Achievement

Recent research from Tennessee, Texas, and Massachusetts has now proven what parents have known


Effects on Students' Math Scores in Dallas
(Grades 3-5)
Average Score on Math Assessment 3 years later in Percentile
90
60
50
15
76
27
Students Assigned to 3 Very Effective Teachers in a Row
Students Assigned to 3 Very Ineffective Teachers in a Row
Beginning 3rd Grade Score (Percentile)
Source: H. Jordon, R. Mendro, & D. Weeresinghe, "Teacher Effects on Longitudinal Student Achievement," 1997.

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all along: children learn much more in some classrooms than others—even when they are in the same school (Boston Public Schools, 1998; Sanders & Rivers, 1998; Jordan, Mendro & Weerasinghe, 1997; Hanushek, 1986). The surprises are in the magnitude of the difference and in the poor correlation between principals' evaluations of teacher effectiveness and actual student achievement gains on standardized tests.

Question for State Policymakers:
How can each of the states in a region improve teacher quality while ensuring an adequate supply to meet future needs?

Dr. William L. Sanders, director of the Value-Added Research and Assessment Center at the University of Tennessee, has analyzed results of annual statewide tests in five content areas, grades 3 through 8, since 1990. This is believed to be the largest longitudinal data-base of student achievement in the country. By looking at average student learning gains over a three-year period for each teacher, he is able to provide data on teacher effectiveness, independent of external variables such as socio-economic status or the occasional low-performance day of an individual student. The findings hold powerful information for policymakers.

Students whose initial achievement levels are comparable will experience vastly different academic outcomes due to the sequence of teachers to whom they are assigned (Sanders & Rivers, 1998). Among third graders with just above average performance in mathematics, those who were then assigned to three highly effective teachers scored in the 76th percentile three years later, while those who were assigned to three ineffective teachers scored in the 27th percentile[1]. "Differences of this magnitude—50 percentile points—are stunning" and can mean "the difference between entrance into a selective college and a lifetime at MacDonalds," says Dr. Kati Haycock, Director of the Education Trust (Haycock, 1999).

Similar findings on the powerful impact of teacher effectiveness on student learning have come from studies in Dallas and Boston. They all point to the same thing: "The difference between a good teacher and a bad teacher can be a full level of achievement in a single year," summarizes Eric Hanushek, the University of Rochester economist known for prior claims that schools make little to no difference.

Equally compelling is Sanders' data that race and socioeconomic status are not barriers to learning. Highly effective teachers were found to be effective regardless of racial composition of the class, poverty level of the students, heterogeneity of the class, school climate, or class size. "These other factors pale to triviality in comparison to teacher effectiveness," he states (Sanders, 1999). Sanders' point is not that factors such as poverty make no difference to overall achievement, but that effective teachers can still achieve a year's worth of growth, starting from where the children are when they enter the classroom. "If two children [of different races or SES] enter at the same level, they will leave at the same level," he has found.

Teacher Supply: A Look at the Regional Labor Pool

Data that address teacher supply and demand are, for the most part, gathered at the national level or by the individual states through their data service centers. Difficulties arise, however, when attempting to make regional comparisons. States generally collect data that serve their own particular needs and reflect their budgetary capacity. In addition, when state level data are used to make education projections, they frequently vary by timeframe, focus, and depth. Therefore, the data presented here, while limited, have been derived primarily from national sources to achieve a fair level of comparability.

Questions for State Policymakers: Are states better off pursuing teacher quality competitively or cooperatively? Is there a need to develop a regional protocol for data collection regarding issues that affect teacher quality?

It is clear that the labor market flows are impacted

[1] Highly effective teachers, as defined by Sanders, are the 20% of teachers whose students make, on average, the greatest score gains on the statewide assessments.

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by factors such as projected student enrollments, teacher salary differentials, and teacher shortages within certain subject areas. In addition, factors affecting approaches to teacher quality and availability vary significantly across and often within the states in the region. Delaware, for example, is a net importer of teachers, with more than half the teachers in the state receiving their initial professional training in another state. At the same time, the largest trainer of teachers in the state, the University of Delaware, exports most of its teacher education graduates to other states. In Pennsylvania, by contrast, more teachers finish training each year than are needed in the schools (although distribution is often still a problem) and many of their graduates apply for jobs across state lines. With projected decreases in enrollment, Pennsylvania will likely become an even larger exporter.

Questions for State Policymakers: Which of the factors contributing to the current and predicted teacher shortages can be removed or reduced? In which areas would regional collaboration add value?

School Enrollment

Nationally, total public school enrollment is projected to rise from 46.8 million in 1998 to 48.2 million in 2008, an increase of 3% (U.S. Department of Education, 1997). During this same period, total private school enrollment is expected to increase by 2%, from 5.9 to 6.1 million. In Delaware, Maryland, and New Jersey, total enrollments are expected to increase from 4 to 8 percent. Only in Pennsylvania and the District of Columbia are overall declines projected, and even there the secondary school enrollments are projected to increase (see table below).

Turnover, Attrition and the Reserve Pool

Teacher turnover is expected to be very high in the region over the next ten years. One cause is the aging teacher corps. The estimated percentages of teachers who will be eligible for retirement (20 or more years of service) within the next five years are as follows:

Delaware	40%	Maryland	32%
New Jersey	42%	Pennsylvania	39%

(Source:NCES Schools and Staffing Survey, 1993-94; projections developed by American Federation of Teachers.)

Attrition has always been high in the first five years, but is increasing in may areas. Also, the rate of return after a break has decreased from 42% in 1987-88 to 31% in 1990-91 (Darling-Hammond, 1998).

Salary Differences

Efforts to recruit new and more qualified teachers are complicated by at least two salary factors: 1) the differential between starting salaries in education and those in other career fields that demand comparable preparation, and 2) the range of salaries offered to beginning teachers across the region. Competition for those prepared in mathematics and/or the sciences is especially keen, which will increasingly create problems for schools in search of teachers in these areas. For example, beginning salaries in computer science and engineering continue to increase, while beginning salaries in education have begun to decline.

Projected Shortages

Although nationally we produce roughly twice as many teachers each year as are hired, the geographic

Regional Projections of Public School Enrollment between 1996 and 2008.

Source: U.S. Dept. of Education, National Center for Education Statistics, *Digest of Education Statistics, 1997*

State	Elementary Enrollment	Secondary Enrollment	Overall Change
Delaware	+ 3%	+ 20%	+ 8%
District of Columbia	-12%	+ 1	-9%
Maryland	+ 0.3%	+ 16%	+ 5%
New Jersey	+ 0.1%	+ 15%	+ 4%
Pennsylvania	-7%	+ 2%	-4%

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distribution and the distribution across certification areas do not match well with school and district needs. In 1998, the American Association for Employment in Education reported on teacher shortages in the mid-Atlantic region (defined to include New York along with Delaware, the District of Columbia, Maryland, New Jersey, and Pennsylvania). Those subject areas determined to have "considerable shortage" include audiology, bilingual education, physics, and speech pathology. Three of the four shortage areas deal directly with special needs students. Other fields seen as having "some shortage" include computer science, English as a second language, Japanese, Spanish, mathematics, science, special education, and technical education (American Association for Employment in Education, 1998).

A number of factors contribute to these shortages, including early retirement inducements, class-size reduction programs, lack of reciprocity and portability of pensions, and difficult school climates.

Recommendations for Regional Action

Clearly some actions required to address teacher quality and supply, such as salaries and school climate, must be dealt with on a state or local level. However, regional collaboration in a number of other important areas can enhance each state's efforts and create new levers for improvement. A set of recommended regional actions, intended to work together to improve teacher quality while at the same time addressing supply needs, is described below. These recommendations rest on the following assumptions:

- Regional reciprocity will allow for better matching between holders of specific certificates and districts that need them and will reduce attrition caused by interstate moves.
- Creation of a special recognition for academically accomplished new teachers will increase quality.
- Teachers with higher levels of demonstrated knowledge and skill in basic literacy, content areas, and pedagogy will be better able to improve student learning.
- Quality induction programs will reduce attrition of new teachers, as well as increase teaching quality.
- An electronic hiring hall and streamlined licensure/application processes will draw larger numbers of teachers from outside the region.
- Enhanced, targeted data collection will provide a basis for improved teacher preparation and recruitment policies and practices.

Recommendation 1. Regional Reciprocity

Create full regional reciprocity, with portable pensions and salary credits, for those who meet "exemplary" performance levels and give priority listing to these candidates on a regional "electronic hiring hall."

Rationale: Full regional reciprocity for high-performing teacher candidates can accomplish three purposes:

- It can serve as an incentive for high performance on basic skills and content and pedagogy knowledge requirements within each state.
- It can help districts access high-quality candidates who have moved into the state.
- By building reciprocity around optional high standards of achievement, it can provide flexibility to each state, while acting as a catalyst to raise teacher standards over time.

Many states are setting at least two passing cut scores on K-12 student assessments, with the higher score designed to motivate and acknowledge excellence and the lower one used to establish the standard for all students to meet. In a similar way, regional reciprocity can be structured around two passing levels: one indicating that the prospective teacher has met the basic standards, and a second, higher level indicating the student teacher has demonstrated exemplary knowledge and skill. Teachers in training would know that attainment of the higher bar would yield immediate, trouble-free licensure in multiple states and priority listing on a shared electronic hiring hall as a "Meritorious New Teacher," thereby motivating selection of the best preparation programs and higher academic achievement.

Reciprocity can also help districts tap into the re-

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serve pool of teachers. The percentage of teachers who return to the classroom after a break has dropped to nearly half its 1970's level (from 66% to 36%), due in large part to increased mobility. According to the National Center for Education Statistics (NCES, 1997), 35% of those who leave teaching do so because they move (Murnane, 1996). Unique state coursework and licensure requirements create disincentives for capable teachers to continue teaching after a move, and thereby reduce the quantity and quality of the applicant pool for districts.

Creating an optional, high-level reciprocity agreement also provides flexibility for each state to raise its teacher standards on a timeline feasible for that state. Simultaneously, the higher regional bar can be used as a rationale for action at the state level.

As an incentive to those who make hiring decisions, school profiles could be amended to include both the number of new hires in each building during the past year, and the number who were "Meritorious New Teachers."

Specific Policy Proposals for Regional Reciprocity:

a) Agree as a region on a core set of licensure requirements and assessments, and set optional higher cut scores for designation as a "Meritorious New Teacher."

Requirements for Designation as Meritorious New Teacher:

- **Initial license:** graduation from teacher preparation program with National Council for Accreditation of Teacher Education (NCATE) and specialty organization approval; PRAXIS I and II scores at or above regional high bar.
- **Continuing license:** Interstate New Teacher Assessment and Support Consortium (INTASC) induction assessment score at or above regional high bar.
- **Advanced license:** National Board for Professional Teaching Standards (NBPTS) certification.

It is important to note that states may, under these recommendations, have different options for meeting licensure requirements in addition to those listed above. The special designation as Meritorious New Teacher would be awarded only to those who have completed rigorous training and demonstrated a superior level of mastery.

The task of selecting PRAXIS II modules and setting cut scores will be challenging. State cut scores on common modules should form the basis for setting the regional score. Agreement will be needed on the process to be used within each state to select modules and set cut scores. Process guidelines should be determined by a regional task force that is charged to use as the gauge the skill and knowledge levels needed to prepare students for the high school graduation tests. Under the Regional Reciprocity Compact, each state would agree, given the above, to require no additional tests or courses for candidates from states within the region who meet the cut scores.

Because the reciprocal agreement would be based on nationally recognized and utilized measures such as PRAXIS and INTASC assessments, top teacher candidates from across the nation would be able to apply to be listed as "Meritorious New Teachers" on the electronic hiring hall. Each year twice as many teachers graduate from teacher preparation programs as are hired by schools. Distribution, cumbersome state-by-state licensing systems, costly unique state testing requirements, and lack of access to job listings are major barriers to getting new teachers to the schools that need them. The one-stop electronic site and multi-state licensing would make application to all districts in the region both easy and attractive.

b) Establish an electronic hiring hall (see Recommendation #4) and give priority listing to "Meritorious New Teachers."

c) Create portable pensions, similar to the TIAA-CREF system for higher education, for all reciprocal licenses (including for adminstrators).

d) Add to school profiles the number of new hires and the number who were "Meritorious New Teachers."

e) On "report cards" for teacher preparation programs, list percentage of graduates who qualify as "Meritorious New Teachers."

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Recommendation 2.
Standards for Teacher Preparation

Create higher standards for teacher preparation, and hold institutions of higher education accountable for the knowledge and skill of their graduates.

Rationale: Teachers with strong basic skills, particularly **verbal and math skills**, have been shown to be more likely to produce significant gains in student learning than teachers with lower skills (Ferguson & Brown, 1998; Ferguson & Ladd, 1996; Ferguson, 1991). As Murnane (1996) summarizes the research findings, "...holding quantity and quality of training constant, academically talented teachers do seem to be more effective in the classroom."

Considerable research is showing that in addition to basic verbal and math skills, teachers' deep **content knowledge** is also tied to student learning. The data are particularly compelling for math and science, where teachers with a major in the fields they teach routinely get higher academic performance from students. "In math and science, it is the teacher subject-specific knowledge that is the important factor in determining tenth-grade achievement," concluded Goldhaber and Brewer (1996) after analyzing national longitudinal student data. A recent study in Hawaii (Baker, 1996) found almost a perfect match between student achievement in social studies and the domains in which teachers indicated the most expertise.

There are indications, however, that subject area expertise is falling. The percentage of new entrants to teaching who were among the most academically able fell significantly throughout the 1970's and 1980's, (Murnane et al, 1991; Hanushek & Pace, 1994).

How can states go about requiring academic competency for new teachers? Due to the high level of variability in expectations among institutions of higher education and the tendency for grade inflation within teacher preparation programs (Ballou & Podgursky, 1997), grade point averages should *not* be the measuring stick of mastery.

In order to take advantage of the leverage of a high-standards reciprocity agreement, nationally available standardized tests must be used as the measures of knowledge and skill. While standardized tests come with their own shortcomings, they offer reasonable predictive validity of teacher effectiveness and serve a useful role in protecting children. In discussing the potentially negative effect of certification testing on the racial composition of the applicant pool, Ronald F. Ferguson (1998), an African-American professor at the John F. Kennedy School of Government at Harvard University, argues, "the relevant policy question is whether students on average are better off with the policy in place. I think the answer is yes." States must ensure that every teacher in a classroom has demonstrated a strong foundation in the knowledge and skills needed to help students learn.

Texas and New York are the first states to hold universities and colleges with teacher preparation programs accountable for the knowledge and skill levels of their graduates. In Texas, colleges that have pass rates below 70% (soon to be 75%) will lose the right to prepare teachers. The pass rate applies to every racial/ethnic subgroup—70% of all black graduates, white graduates, Hispanic graduates, and so on. Moreover, if aspiring teachers within an academic department do not pass in sufficient numbers, that department loses the right to prepare teachers. States in the mid-Atlantic region should set similar requirements for their teacher preparation programs.

It should be noted that under this proposal, each state could allow additional, alternate measures for each licensure level. It is only important that a common core be agreed upon as the basis for high standards regional reciprocity. However, this would mean that institutions and individuals that elect to use the alternate measures would be ineligible for the "Meritorious New Teacher" designation and instant regional reciprocity.

Specific Policy Proposals for State Level Teacher Preparation Requirements:

a) Require strong basic skills: Require PRAXIS I or SAT scores that reflect a high level of basic skills, higher than that required on state high school graduation exams, for entrance into teacher education programs.

b) Require strong content and pedagogy knowledge: Require an academic minor for elementary education majors and academic major for secondary teachers[2]; re-

[2] Diane Ravitch recommends an academic major even for elementary teachers (Ravitch, 1998).

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quire PRAXIS II (or comparable test) for verification of content and pedagogy knowledge. The PRAXIS II content modules and cut scores for secondary teachers should be based on the knowledge and skill levels needed to prepare high school students for graduation tests.

c) Hold universities and colleges with teacher preparation programs accountable for the success of their graduates (required by Higher Education Act): Require a significant majority of teaching graduates from each institution to pass assessments for continued program approval/funding.

Question for State Policymakers:
While higher standards for teachers are needed, this means that a comparable emphasis will have to be placed on the recruitment of more highly qualified young adults into teaching. What incentives can be used to recruit, retain, and reward such people?

Recommendation 3. Tiered Licensure System

Create in each state a three-tiered licensure system, including an induction period, with demonstrations of competency as the gateway to each level. Tie initial teacher licensure to completion of an approved program and mastery of content and pedagogy knowledge and skills, as described above. Tie continuing licensure and tenure to *demonstrations of effectiveness in the classroom* during a development-focused induction period. Award the highest level of licensure only to those who successfully complete National Board Certification or an equally rigorous performance assessment of excellence in teaching.

Rationale: A growing body of research supports a very common-sense point of view: College courses alone do not prepare teachers to be effective in the classroom.

A recent study by NCES (1999) found that only one in five teachers feels "very well prepared" to work in a modern classroom.

The preparation of physicians was at a similar crossroads at the turn of the century. Concerned about the large variation in physician skills and patient outcomes, the Flexner Report of 1910 called for two years of clinical experience within a teaching hospital prior to full licensure. Today, experienced physicians mentor and oversee young doctors, guiding their development of sophisticated diagnostic and treatment skills, during the third and fourth years of medical school.

A growing number of states, including Connecticut, California, Illinois, and Maryland, are requiring the same type of guided induction for beginning teachers. The existing body of research, although still small, indicates that new teachers who have participated in quality induction programs are more effective teachers (Bolam, 1995; Smylie, 1994; Far West Labs, 1992).

Far West Labs, after evaluating the impact of the California New Teacher Project on teaching quality, concluded, "The more intense the training, support and assessment, the more dramatic the results." In a more recent comparison of new teacher support programs, Ingersoll found that the existence of the program was less important than its rigor (1997).

Thirty-eight states are working together, under the umbrella of INTASC, to create ways to measure whether a beginning teacher deserves a license to continue teaching. The prototype on which they are building is the Connecticut Beginning Educator Support and Training Program, which requires two years of mentoring and training as well as successful completion of a performance assessment involving observations, instructional planning, and analysis of student work. Not only has this improved the effectiveness of new teachers, according to Dr. Ray Pecheone of the Connecticut Department of Education, it has ensured that those who received continued licensure and then tenure have been carefully and extensively evaluated (Pecheone, 1999).

In addition to improving teacher effectiveness, quality induction programs have been shown to have a significant impact on attrition. While nationally nearly half of new teachers leave the profession within their first five years, with academically talented teachers leaving at higher rates than others, induction has been shown to reduce attrition by up to two-thirds (Darling-Hammond, 1997). Turnover accounts for 66-75% of new hires; thus, reducing new teacher attrition can go a long way toward preventing predicted teacher shortages while increasing quality.

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Again, it is essential that requirements for each tier of licensure be based on nationally available measures in order to maximize the potential of regional reciprocity.

Specific Policy Proposals for State Licensure Requirements:

a) Provide a three-tiered licensure system consisting of:

- **An Initial License:** earned through the completion of an accredited teacher preparation program (NCATE program and specialty organization approval, or similar accreditation), plus the requirements listed in Recommendation #2.
- **A Continuing License:** earned through the completion of a minimum 2-year quality induction program and a passing score on INTASC's beginning teacher assessment or a comparable performance assessment.
- **An Advanced License:** earned through gaining National Board Certification, or other state-approved national certification in areas not addressed by NBPTS.

Questions for State Policymakers:
Should higher levels of compensation for teachers meeting higher standards of training and performance be a regional priority? How do alternative routes for licensure fit into such a reciprocity agreement?

Recommendation 4. Electronic Hiring Hall

Leverage pooled regional resources to create a streamlined, technology-based application and hiring process and electronic hiring hall, and provide need-based implementation grants within states.

Rationale: Every year American colleges and universities graduate roughly twice as many teachers as are needed by schools, and 60,000 newly prepared teachers do not find jobs in the state in which they trained (Darling-Hammond, 1998). From the national perspective, quantity is not the problem. Distribution, however, is a major problem, as well as quality. Some states are net exporters of teachers, while others train less than half of the number they need. Complex and cumbersome application and certification processes act as barriers to districts seeking the best qualified candidates, as well as to candidates seeking employment (Wise, Darling-Hammond & Berry, 1987). Lost files, unfilled requests for information, late budget decisions, and late notification of job availability are some of the reasons cited by new teachers who decide not to enter teaching after graduation and certification. Through streamlined, user-friendly technology-based hiring halls, districts such as Fairfax, Virginia and New Haven, California have been able to turn shortages into surpluses and hire highly qualified candidates.

Specific Policy Proposals for Shared Electronic Hiring Hall:

a) Develop/acquire through shared resources the technological tools needed to make hiring procedures more efficient and user-friendly.
Software for a state-of-the-art electronic hiring hall has been developed by CalTEACH in California and is available for little to no cost. The committee that designed the software included district personnel directors, such as Jim O'Laughlin from New Haven, who won awards for his technology-based teacher recruitment and hiring system. Postings of positions, searches for applicants with specific qualifications, requests for information, and tracking of applicants can be handled quickly and cost-effectively, thereby improving recruitment.

Setting up and maintaining such an electronic resource should be done on a regional basis with pooled resources, thereby significantly reducing the development and maintenance cost to each state.

b) Look into joint acquisition of technological tools needed to streamline licensure processes within state agencies.

c) Provide need-based grants to districts for electronic personnel systems.

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Recommendation 5. Data Collection & Evaluation

Seek funding as a region for a longitudinal impact study to inform future efforts to improve teacher effectiveness.

The data from Tennessee, Texas, and Massachusetts are compelling: differences in teacher effectiveness can and do result in life-changing differences in student learning. Research is critical to helping educators and state leaders answer such questions as, What are the characteristics of the most effective teachers? What is the differential impact on the effectiveness of different teacher training scenarios? Yet in many areas concerned with teacher development there has been little study and analysis, forcing policymakers to make decisions using assumptions based on limited data.

If the mid-Atlantic states were to create a reciprocity compact around raised teacher preparation requirements, policymakers owe it to taxpayers and children to monitor the impact of such a system, and these findings could provide important information to researchers and policymakers both in the region and nationwide. To our benefit, working as a multi-state region should increase our opportunities for federal and private funds to support such data collection and analysis.

Next Steps

The first step toward regional cooperation on teacher quality and availability should be the creation of two small task forces—one which would explore in detail the certification/licensure issues posed by the above recommendations, and another to investigate the options and costs for the electronic hiring hall and streamlined, Web-based state certification systems. After these groups have gathered information and formed recommendations, the Executive Seminar attendees should be re-convened to come to agreement on the priorities, action steps, and timeline.

Conclusion

The next decade holds a tremendous challenge for every state and for public education overall. While major improvements are required to meet our goals for today's students, future cohorts of children, who are likely to have an increasing range of backgrounds and needs, will probably make the task even more daunting. Given all that rides on the outcome of our efforts to reach these goals, it cannot become a question of whether or not we *do*, but *how*. By working as a region on the important pieces of teacher quality, licensure, and recruitment, we can create new levers for education improvement and more opportunities for all students to succeed.

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A Regional Meeting to Discuss Teacher Quality and Supply

In February, 1999, state education policymakers from four mid-Atlantic states and the District of Columbia met for a day-and-a-half seminar to address issues regarding teacher quality and supply. Specifically, those at the meeting were asked to consider the recommendations put forth in the white paper, "Ensuring Teacher Quality and Supply in the Mid-Atlantic Region."

Participants included State Board members, chief state school officers and key department staff, governors' office staff, legislators, business leaders, and higher education leaders. The regional lab at Temple University and The Council for Basic Education provided support.

The meeting opened with a presentation by Dr. William Sanders on the impact of teacher effectiveness on student learning. The data accumulated by Dr. Sanders over eight years makes it clear that highly effective teachers are the key prerequisite to high student performance. Information was then provided on the regional nature of our teacher labor market, after which Dr. Barnett Berry of the National Commission on Teaching and America's Future focused on the policy implications of efforts to improve teacher quality.

The group then turned to discussion of the white paper's five recommendations. It was noted that just two days prior to the meeting Secretary Riley, in his State of Education address, called for raised teacher preparation standards, three-tired licensure systems, greater reciprocity, and a national electronic hiring hall—central elements of four of the five recommendations in the white paper.

Representatives from each state were then assigned, by area of expertise, to break-out groups to discuss each of the recommendations in greater depth. These groups discussed each state's needs, readiness, and special issues raised by the recommendation. Background information on the relevant policies and regulations in each state was provided.

Time was then given for each state team to meet and discuss what they would want to see as next steps, if anything. When the full group reconvened, participants shared their surprise at how very different teacher preparation and licensure requirements are state to state. State Board members noted the tendency to fear raising standards above those of other states in the region due to supply needs. When the states and D.C were asked to report what they wanted to see happen, each agreed that the group should move forward as a region to explore how the recommendations could, with modifications as needed, be implemented. Each state had concluded that it has more to gain than to loose by working collaboratively rather than competitively on teacher quality.

Funding is now being sought from the U.S. Department of Education as well as foundations to support this regional effort. A K-16 regional council will be created to oversee and coordinate the work of various task forces. We anticipate that this work will require at least five years and look forward to a sustained effort to ensure an adequate pool of highly effective teachers for our region.

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